

RITU RAJ

Senior Engineer – Cloud DevOps & AI Solutions

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PROFESSIONAL SUMMARY

Senior Cloud & AI Solutions Engineer with 10+ years of experience architecting enterprise multi-cloud platforms (AWS, Azure, GCP) and production-grade Agentic AI systems. Built CloudIQ — Ciena's central AI orchestration platform — from scratch, serving as the single intelligent layer for all cloud service interactions across the organization. Driving 7 of 9 AI Council initiatives, reclaiming 30+ manual hours/month through automation, and targeting 40% faster P1 incident resolution through next-gen multi-agent architecture. 6x Anthropic AI certified.

KEY HIGHLIGHTS

- Built CloudIQ from scratch — Ciena's central AI orchestration platform serving all cloud operations
- 98% developer onboarding reduction | 30+ hrs/month reclaimed | 70% reporting effort eliminated
- \$8M+ cloud cost savings delivered at Capgemini via serverless automation
- 6x Anthropic AI Certified | Contributing to 7/9 org-wide AI Council initiatives
- 10+ years across enterprise AI, multi-cloud architecture, FinOps, and DevOps automation

TECHNICAL EXPERTISE

Cloud Platforms: AWS, Azure, GCP

Cloud Services:

- **AWS:** Lambda, S3, DynamoDB, Glue, Athena, IAM, EC2, EKS, Step Functions, Bedrock
- **GCP:** Cloud Functions, GKE, Recommendations, IAM WIF, Vertex AI
- **Azure:** Azure Advisory, Azure Functions

AI, LLM & Agentic Frameworks: Microsoft Copilot Studio, Power Platform, Model Context Protocol (MCP), Agent-to-Agent (A2A) Protocol, RAG, LlamaIndex, LangGraph, Ollama, Agentic AI

Enterprise Integrations & Tools: Axway Integration Gateway, Power Automate, SharePoint, ServiceNow KB, VS Code, Jira

Languages: Python (FastAPI, PySpark, Boto3, Unittest, Moto), PHP, HTML/CSS, JQuery

Databases: PostgreSQL, MySQL

Infrastructure as Code (IaC): Terraform

CI/CD & Version Control: GitHub Actions, GitHub

Containerization: Docker, Kubernetes

Design & Security Principles: Clean Architecture, SOLID Principles, Serverless Architecture, Microservices, Zero Trust Policy

Operating Systems: Linux, Windows

CERTIFICATIONS

- 6x Anthropic AI Certifications (Agentic AI, MCP, Agent Frameworks)
- Google Associate Cloud Engineer
- AWS Certified Developer – Associate (DVA-C01)
- AWS Certified Cloud Practitioner (CLF-C01)
- Hugging Face LLM Course / Agent Course / MCP Course
- Data Analysis with PySpark — Coursera

- AWS Cloud Technical Essentials / Cloud Cost Management — Coursera

PROFESSIONAL EXPERIENCE

Ciena India Pvt Ltd | Senior Cloud DevOps & AI Solutions Engineer | September 2022 – Present

Key Platforms: CloudIQ | Cloud-Assist | AI DevPlayground | IT Cloud Service Portal

Enterprise AI Platform Architecture & Innovation

- Built CloudIQ from scratch — Ciena's enterprise AI orchestration platform — integrating SharePoint, ServiceNow KB, Power Automate, and custom APIs into a single intelligent layer that powers cloud advisory, cost insights, issue resolution, vulnerability remediation, and security assessments, reclaiming 30+ manual hours/month across cloud operations.
- Drove 30%+ reduction in manual cloud selection effort by delivering an AI-driven Multi-Cloud Decision Engine with dual-mode access (IT Cloud Service Portal + Microsoft Teams), exceeding original project scope and eliminating dependency on cloud SMEs for routine guidance.
- Architected Cloud-Assist, a next-generation distributed multi-agent platform using A2A and MCP protocols, evolving CloudIQ from a single-agent system into a scalable agentic AI ecosystem — targeting 40% reduction in P1 incident resolution time.
- Delivered a unified AI-Powered Cost Estimator across AWS, Azure, and GCP with interactive AI-assisted deep-dives, achieving 90% variance accuracy target between pre-deployment estimates and actual spend — improving BU budget alignment.

DevOps Velocity & Operational Excellence

- Slashed developer onboarding time by ~98% (1 day → minutes) by designing AI DevPlayground — a plug-and-play workspace using Docker DevContainers — validated by 60+ engineers with zero issues during an enterprise-wide Hackathon. Phase 2 rollout underway with Axway Integration Gateway POC completed.
- Collapsed vulnerability remediation lead time from weeks to <24 hours (100x improvement) by engineering an AI-automated compliance engine on the IT Cloud Service Portal, delivering automated vulnerability reports via email.
- Eliminated manual inventory tracking by building a centralized Application Inventory module with automated SharePoint sync, providing real-time visibility into cloud application ownership, criticality, and BCDR readiness.
- Integrated a Security Assessment AI Agent into the IT Cloud Service Portal, enabling authorized users to generate AI-driven security scores on-demand — reducing manual security review effort.

Multi-Cloud FinOps & Cost Optimization

- Reclaimed 30+ productive hours/month for cloud account owners by deploying an automated savings report framework delivering actionable insights and remediation recommendations across AWS, Azure, and GCP.
- Eliminated 70% of manual reporting effort by building self-service spend and savings visualization on the IT Cloud Service Portal — enabling Budget and Business teams to access real-time trends on-demand.
- Empowered executive decision-making by delivering a unified Top-10 Cloud Spend & Savings Insights Framework across all cloud providers — replacing ad-hoc spreadsheet analysis with automated, cross-cloud visibility.

Technical Leadership & Governance

- Contributing to 7 of 9 AI Council initiatives (4 owned, 3 collaborated), facilitating cross-squad architecture sessions to standardize enterprise AI agent frameworks and drive organizational AI maturity.
- Delivered 8 Lunch & Learn sessions (~8+ hours) covering emerging AI technologies, MCP/A2A protocols, and AWS Summit insights — building team-wide cloud and AI capability at a cadence of 1 session/month.
- Completed 6 AI certifications from Anthropic (Agentic AI, MCP, Agent frameworks), continuously upskilling via industry events, Substack, and technical communities to stay ahead of emerging AI patterns.

Capgemini | Consultant | April 2021 – September 2022

Tech Stack: Python, AWS Lambda, Step Functions, Boto3, DynamoDB, Glue, S3

- Drove over \$8 Million in cloud cost savings by designing and deploying Python microservices using AWS Lambda, Step Functions, and Boto3 to identify and optimize underutilized multi-tenant assets.

- Designed loosely coupled serverless infrastructures and verified data efficiency by executing critical POCs for Glue Catalog cross-account access and real-time DynamoDB Stream processing.
- Refactored legacy Python codebases utilizing OOP principles and implemented robust testing suites that raised system code coverage to 93%.

Ninestars Information Technology Pvt. Ltd | Software Engineer | August 2016 – April 2021

Tech Stack: PHP, Python, Elasticsearch, AWS EC2, HTML, CSS, JavaScript, MySQL, Amchart, PHPExcel

- Progressed from a fresher handling internal website maintenance and bug fixes to a full-stack developer owning end-to-end delivery of enterprise applications using PHP MVC/HMVC frameworks.
- Architected and developed a Hybrid MVC (HMVC) based media analytics platform for Burrelles — a media monitoring company — enabling PR clients to track and analyze news across publishers and social media sources.
- Built a scalable data processing pipeline by ingesting cleaned news feeds, indexing into Elasticsearch, and enabling near real-time retrieval via keyword-based alerts and historical search capabilities.
- Developed end-to-end product features (frontend + backend) using HTML, CSS, JavaScript, and Python — including dashboards with sentiment analysis, trending keywords, word maps, and publisher-level insights to support data-driven PR decision-making.
- Designed and implemented interactive analytics dashboards providing insights such as sentiment tonality, trending topics, and content distribution — improving visibility into media coverage for enterprise clients.
- Deployed and managed applications on AWS EC2 infrastructure, ensuring system reliability and scalability — marking the beginning of hands-on cloud experience.
- Built an internal cloud cost usage dashboard, improving visibility into resource consumption and influencing early FinOps practices within the team.

EDUCATION

Bachelor of Technology in Information Technology | Techno India, Salt Lake (Class of 2016) | CGPA: 7.69